







# Air Cylinder

# Series CG1

ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

## Variations

Series	Action	Rod	Cushion	Basic	Variation					Bore size (mm)	Page
					With One-touch fitting	With rod boot	Air-hydro	Clean series	Copper free		
<b>Standard/Series CG1</b> 	Double acting	Single rod	Rubber	●	●	●	●	●	20 to 100	1.7-2	
		Double rod	Air	●	●	●	●	●			
<b>Standard/Series CG1</b> 	Single acting	Single rod (Spring return) (Spring extend)	Rubber	●					20 to 40	1.7-20	
			Air	●							
<b>Non-rotating rod Series CG1K</b> 	Double acting	Single rod	Rubber	●					20 to 63	1.7-26	
		Double rod	Air	●					40 to 63		
		Double rod	Rubber	●						20 to 63	1.7-30
<b>Direct mount Series CG1R</b> 	Double acting	Single rod	Rubber	●			●	●	20 to 63	1.7-35	
			Air	●							
<b>Direct mount/Non-rotating rod Series CG1KR</b> 	Double acting	Single rod	Rubber	●					20 to 63	1.7-40	
<b>Low friction Series CG1□Q</b> 	Double acting	Single rod	No cushion (ø20 to ø63) Rubber (ø80, ø100)	●					20 to 100	1.7-43	

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## Applicable auto switch

Auto switch model	Band mounting
<b>Reed switch</b>	D-C7/8, D-C73C/C80C D-B5/B6, D-B59W
<b>Solid state switch</b>	D-H7□, D-H7□W, D-H7□F D-H7BAL, D-H7C, D-G5/K5 D-G5□W/K59W, D-G59F, D-G5NTL

## Made to Order

Refer to p.5.4-1 for made to order products of series CG1

# Series CG1

## Mounting Bracket Part No.

Mounting bracket	Bore size (mm)							
	20	25	32	40	50	63	80	100
Axial foot*	CG-L020	CG-L025	CG-L032	CG-L040	CG-L050	CG-L063	CG-L080	CG-L100
Flange	CG-F020	CG-F025	CG-F032	CG-F040	CG-F050	CG-F063	CG-F080	CG-F100
Trunnion	CG-T020	CG-T025	CG-T032	CG-T040	CG-T050	CG-T063	—	—
Clevis**	CG-D020	CG-D025	CG-D032	CG-D040	CG-D050	CG-D063	CG-D080	CG-D100
Pivot bracket	CG-Q20-24A	CG-Q25-24A	CG-Q32-24A	CG-Q40-24A	CG-Q50-24A	CG-Q63-24A	CG-Q80-24A	CG-Q100-24A

\* Order two foot brackets per a cylinder.

\*\* Clevis pins, snap rings and mounting bolts are attached for the clevis.

\*\*\* Mounting bolts are attached for the foot type and the flange type.

## Auto Switch Mounting Bracket Part No.

Auto switch model	Bore size (mm)							
	20	25	32	40	50	63	80	100
D-C7/C8	BMA2-020	BMA2-025	BMA2-032	BMA2-040	BMA2-050	BMA2-063	—	—
D-H7								
D-B5/B6	BA-01	BA-02	BA-32	BA-04	BA-05	BA-06	BA-08	BA-10
D-G5/K5								

\* A set of following stainless steel mounting screws is attached.  
(A switch mounting band is not attached. Please order the band separately.)

BBA3: D-B5/B6/G5 types

BBA4: D-C7/C8/H7 types

• "D-G5BAL" and "D-H7BAL" switches are set on the cylinder with the screws above when shipped.

When a switch only is shipped, "BBA3" or "BBA4" screws are attached.

## Weight

Bore size (mm)		20	25	32	40	50	63	80	100
Basic weight	Basic	0.10	0.17	0.26	0.41	0.77	1.07	2.04	3.17
	Axial foot	0.21	0.30	0.42	0.63	1.25	1.79	3.00	4.92
	Flange	0.18	0.27	0.40	0.61	1.11	1.57	2.75	4.52
	Trunnion	0.11	0.19	0.29	0.46	0.91	1.21	—	—
	Clevis	0.15	0.25	0.41	0.64	1.17	1.75	2.75	4.45
Pivot bracket		0.08	0.09	0.17	0.25	0.44	0.80	0.98	1.75
Single knuckle joint		0.05	0.09	0.09	0.10	0.22	0.22	0.39	0.57
Double knuckle joint (with pins)		0.05	0.09	0.09	0.13	0.26	0.26	0.64	1.31
Additional weight by each 50 stroke		0.05	0.07	0.09	0.15	0.22	0.26	0.35	0.49
Additional weight by air cushion		0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.03
Additional weight by long stroke		0.01	0.01	0.02	0.03	0.06	0.10	0.19	0.26

Calculation example: **CG1LA20-100**  
(Foot, ø20, 100 stroke)

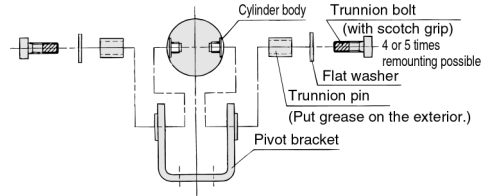
- Basic weight.....0.21 (Foot, ø20)
  - Additional weight.....0.05/50 stroke
  - Cylinder stroke.....100 stroke
  - Additional weight by air cushion...0.01kg
- $0.21+0.05 \times 100/50+0.01=0.32\text{kg}$

## Mounting Procedures

### Trunnion

Follow the procedures below when mounting a pivot bracket on the trunnion.

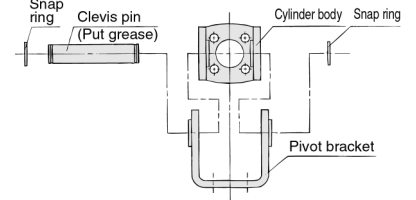
#### ø20 to ø63



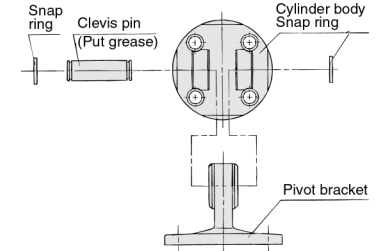
### Clevis

Follow the procedures below when mounting a pivot bracket on the clevis.

#### ø20 to ø63



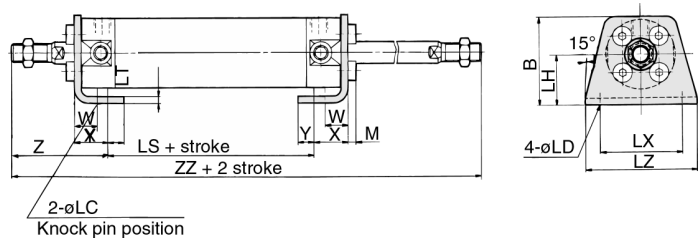
#### ø80, ø100



# Standard: Double Acting Double Rod *Series CG1W*

## With Mounting Bracket

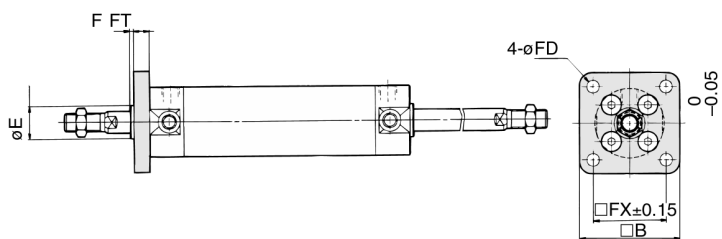
### Axial foot/CG1WLN



### Foot

Bore (mm)	Stroke range (mm)	B	LC	LD	LH	LS	LT	LX	LZ	M	W	X	Y	Z
20	Up to 350	34	4	6	20	53	3	32	44	3	10	15	7	47
25	Up to 400	38.5	4	6	22	53	3	36	49	3.5	10	15	7	52
32	Up to 450	45	4	6.6	25	53	3	44	58	3.5	10	16	8	53
40	Up to 800	54.5	4	6.6	30	60	3	54	71	4	10	16.5	8.5	63.5
50	Up to 1200	70.5	5	9	40	67	4.5	66	86	5	17.5	22	11	75.5
63	Up to 1200	82.5	5	11	45	67	4.5	82	106	5	17.5	22	13	75.5
80	Up to 1400	101	6	11	55	74	4.5	100	125	5	20	28.5	14	95
100	Up to 1500	121	6	14	65	74	6	120	150	7	20	30	16	95

### Front flange/CG1WFN

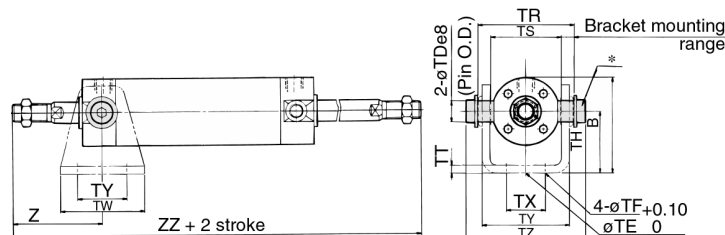


### Front flange

Bore (mm)	Stroke range (mm)	B	E	F	FX	FD	FT
20	Up to 350	40	12	2	28	5.5	6
25	Up to 400	44	14	2	32	5.5	7
32	Up to 450	53	18	2	38	6.6	7
40	Up to 800	61	25	2	46	6.6	8
50	Up to 1200	76	30	2	58	9	9
63	Up to 1200	92	32	2	70	11	9
80	Up to 1400	104	40	3	82	11	11
100	Up to 1500	128	50	3	100	14	14

\* End boss is machined on the flange for øE.

### Front trunnion/CG1WUN



### Front trunnion

Bore (mm)	Stroke range (mm)	B	TDe8	TE	TF	TH	TR	TS
20	Up to 200	38	8 <sup>-0.025</sup> <sub>-0.047</sub>	10	5.5	25	39	28
25	Up to 300	45.5	10 <sup>-0.025</sup> <sub>-0.047</sub>	10	5.5	30	43	33
32	Up to 300	54	12 <sup>-0.032</sup> <sub>-0.059</sub>	10	6.6	35	54.5	40
40	Up to 500	63.5	14 <sup>-0.032</sup> <sub>-0.059</sub>	10	6.6	40	65.5	49
50	Up to 600	79	16 <sup>-0.032</sup> <sub>-0.059</sub>	20	9	50	80	60
63	Up to 600	96	18 <sup>-0.032</sup> <sub>-0.059</sub>	20	11	60	98	74

Bore (mm)	TT	TV	TW	TX	TY	TZ	Z	
							Without rod boot	With rod boot
20	3.2	35.8	42	16	28	47.6	46	66 + l
25	3.2	39.8	42	20	28	53	51	73 + l
32	4.5	49.4	48	22	28	67.7	51	73 + l
40	4.5	58.4	56	30	30	78.7	62	82 + l
50	6	72.4	64	36	36	98.6	71	91 + l
63	8	90.4	74	46	46	119.2	71	91 + l

\* Consists of pins, flat washer and hexagon socket head cap bolt.

### Mounting Bracket Part No.

Mounting bracket	Bore size (mm)							
	20	25	32	40	50	63	80	100
Axial foot*	CG-L020	CG-L025	CG-L032	CG-L040	CG-L050	CG-L063	CG-L080	CG-L100
Flange	CG-F020	CG-F025	CG-F032	CG-F040	CG-F050	CG-F063	CG-F080	CG-F100
Trunnion pin	CG-T020	CG-T025	CG-T032	CG-T040	CG-T050	CG-T063	—	—
Pivot bracket	CG-020 -24A	CG-025 -24A	CG-032 -24A	CG-040 -24A	CG-050 -24A	CG-063 -24A	—	—

\* Order two foot brackets per a cylinder.

\*\* Mounting bolts are attached for the foot and the flange styles.

### Auto Switch Mounting Bracket Part No.

Auto switch model	Bore size (mm)							
	20	25	32	40	50	63	80	100
D-C7, C8	BMA2	BMA2	BMA2	BMA2	BMA2	BMA2	—	—
D-H7	-020	-025	-032	-040	-050	-063	—	—
D-B5, B6	BA-01	BA-02	BA-32	BA-04	BA-05	BA-06	BA-08	BA-10
D-G5, K5								



Note) A set of following stainless steel mounting screws is attached. (A switch mounting band is not attached. Please order the band separately.)

BBA3: D-B5/B6/G5 types  
BBA4: D-C7/C8/H7 types

\* "D-G5BAL" and "D-H7BAL" switches are set on the cylinder with the screws above when shipped. When a switch only is shipped, "BBA3" or "BBA4" screws are attached.